



THE PORT AUTHORITY OF NY & NJ

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Dr. Shyam Sunder
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**SUBJECT: DRAFT OF THE FINAL REPORT ON THE COLLAPSE OF WORLD
TRADE CENTER BUILDING 7**

Dear Dr. Sunder:

I would like to compliment you and your staff for the tremendous effort in preparing the draft report that was released on August 21, 2008.

From the Port Authority's perspective, two statements in the second paragraph on page xxxiii in the report NCSTAR 1A require some clarification.

- *"The installed thickness of the thermal insulation on the floor beams was below that required for unsprinklered or sprinklered buildings..."*

The design documents submitted by Silverstein Properties, Inc., and approved by the Port Authority, clearly specified a fire rating of two hours for the beams, as required by the code. Other places in the NIST report recognized this fact that the installed thickness of the thermal insulation on the floor beams was at or above that required. It is also important to note in the report that as per the Building Code of the City of New York, the installed fireproofing was subject to "controlled inspection" and the Architect/Engineer of Record was responsible for the verification of the thickness for code compliance of the fireproofing as installed.

- *"The stairwells were narrower than those required by the NYCBC..."*

This statement regarding the stairs is based on NIST's own calculation of the net floor area of 34,800 sq. ft. and a corresponding occupant load of 348 (NCSTAR 1-9, page 309). Net floor area for determining the occupant load is defined in NYCBC to be the horizontal occupiable area, excluding the thickness of walls and partitions, columns, furred-in spaces, fixed cabinets, equipment, and accessory spaces such as closets, machine and equipment rooms, toilets, stairs, halls, corridors, elevators, and similar unoccupied spaces. NIST's calculation excluded only the core area, and therefore overstates the net floor area and the corresponding occupant load. Although the net floor area was not specifically indicated on the submitted

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design documents, after deducting all the unoccupied spaces, the Architect of Record would have, in all probability, calculated the net area and occupant load properly, in reaching his conclusion that the two 56 to 58 inch-wide stairs in the building were adequate.

It is my hope that NIST will include these clarifications in its final report. I would also suggest removing the qualifying word "*generally*" from the first sentence in the second paragraph on page xxxiii in the report NCSTAR 1A, in order for these statements to be understood in the proper context.

Additionally, the Port Authority does not have its "own building code"; however it has been the Port Authority's longstanding policy to comply with building codes of the local jurisdictions. The statement, "*...and to construct under its own building code.*" in NCSTAR 1A, Page 1, 1st paragraph, is not accurate and should be corrected accordingly.

I offer the following additional comments for consideration in finalizing the report:

- Refer to NCSTAR 1A, Page xxxii, 1st paragraph, last sentence, "*However, the collapse of WTC 7 highlights the importance of designing fire-resistant structures where sprinklers are not present...*" Although the collapse of WTC 7 is a direct result of extraordinary events – the attacks of 9/11 – it is important to note that all occupants safely evacuated the building and the structure continued to burn unattended by the Fire Department for more than 7 hours.
- Similarly, NIST does not take into account the likely damage to the sprinkler system from debris, in addition to the loss of the water source. NIST also appears to suggest that using the NYC water mains as the only water source was problematic. In all but the most unusual of circumstances, such as 9/11, the water mains are the best and most reliable source of water.
- The report's conclusions do not take into account the debris damage to the building's exterior, including the loss of columns in the southwest corner and damage to the south side. There are eyewitness accounts and photographs which show that debris caused extensive damage to the building's exterior.
- Finally, the recommendations, as drafted, suggest specific relevance to WTC 7 when, in fact, the recommendations relate to and should be followed for all tall buildings.

Sincerely,

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